

Discipline: Agriculture	Sub-discipline: Plant Science
General Course Title: Weeds and Poisonous Plants	Min. Units: 3 Semester
Proposed Suffix: L	
<p>Course Description: The study of the classification, identification, and life cycle of common and poisonous weeds in California production areas and grasslands and their affects on animals and man including management practices such as prevention, mechanical, biological, and chemical methods. Weeds establishment and chemical resistance also discussed. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Explain the botany of weeds and plant physiologic and growth functions. • Identify common weeds found in Central California and statewide. • Explain the methods of safely applying various herbicides. • Describe the differences in weed species and their habitats. • Explain the phytotoxic properties of applied herbicides. • Explain the role of biologicals in weed management. • Describe specific cultural practices to prevent and manage weed infestations. • Explain the public perceptions about pesticides and be able to defend weed management practices. • Describe various career options available in weed science. • Develop a weed collection of 30 weeds representing 10 different families. • Present a herbicide report to classmates and instructor. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Introduction to Weed Science <ol style="list-style-type: none"> A. What is a weed? 2. Weed Identification <ol style="list-style-type: none"> A. Families and their characteristics. 3. Weed Life Cycles – plant physiology and growth <ol style="list-style-type: none"> A. Annual, perennial, and biennial <ol style="list-style-type: none"> 1. Review of plant growth and meristematic sites <ol style="list-style-type: none"> a. mitosis b. photosynthesis and respiration B. Means of propagation <ol style="list-style-type: none"> 1. Sexual and asexual C. Phenology data and weed growth 4. Poisonous Weeds and Their Effects <ol style="list-style-type: none"> A. Identification B. Effects on domestic animals and livestock 5. Development of Weed Outbreaks <p>Weeds and Poisonous Plants (Content Continued)</p> <ol style="list-style-type: none"> 6. Weed Management Practices 	

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

- A. Prevention
 - 1. Cultural practices – crop specific
 - a. cropping systems and tillage
 - 2. Chemical practices – crop specific
 - a. pre-plant and PPI herbicides
 - B. Weed infestation management
 - 1. Cultural practices – crop specific
 - a. cropping systems and tillage
 - 2. Chemical practices – crop specific
 - a. layby and non-selective materials
 - b. persistence and cropping systems
 - c. herbicide families and their use
 - 1) modes of action
 - 3. Avoiding future infestations
 - a. crop and management rotation practices
 - 4. Chemical resistance
 - 5. Roundup ready crops and weed management
 - C. Organic weed management practices
 - 1. Flame weeding
 - 2. Weeder geese, goats, and other animals
 - 3. Organic herbicide materials
 - 4. Allelopathy
 - 5. Living mulches and cover crops
 - D. Biological weed management
 - 1. History
 - 2. Successes and failures
 - 3. Future prospects
 - E. Sprayers and their calibration
 - 1. Nozzle selection
 - 2. Herbicide formulations and mixing
 - 3. Safety
 - F. Weed management situations
 - 1. Turf and ornamental landscapes
 - 2. Range weed management
 - 3. Weed management in orchards and vineyards
 - 4. Irrigated pasture and forage weed management
 - 5. Weed management in cereals
 - 6. Weed management in row crops
7. Issues in Weed Management
- A. Career options
 - B. FIFRA and material phase-out.
 - C. New materials and recouping costs
 - D. Health problems and chemical weed usage

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
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Typical Textbooks, Manuals, or Other Support Materials

No specific texts available

Statewide Articulation: CPSLO-PPSC 321, CPP-PLT 331/L*, others as lower division elective (*upper division – subject matter competency determined by university advisor)

FDRG Lead Signature:

Date:

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Internal Tracking Number